

# Erythema multiforme associated with *Entamoeba histolytica*



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**Key words:** *Entamoeba histolytica*; erythema multiforme; parasitic infection.

## INTRODUCTION

Erythema multiforme (EM) is an acute self-limited but potentially recurrent skin condition. It is characterized by typical or atypical target lesions and may include mucosal lesions.<sup>1</sup> EM major includes severe mucosal involvement and systemic symptoms, such as fever and joint pain, while these features are typically absent from EM minor.<sup>1</sup> The most common causes of EM are herpes simplex virus (HSV) and *Mycoplasma pneumoniae* infection. Several other viral, bacterial, and, rarely, fungal infections have been reported in association with EM.<sup>1</sup> We present the first case in the literature, to our knowledge, of EM associated with *Entamoeba histolytica* infection, a parasitic infection that causes diarrhea and mild abdominal pain.

## CASE REPORT

A 38-year-old man presented to the dermatology clinic upon the new onset of a pruritic, painful rash on the hands. He had returned from a trip to Ecuador 10 days prior to presentation. Physical examination revealed many targetoid bullae with dusky centers on the palms (Fig 1, A). No other lesions were present, including on the soles, oral mucosa, and genitals. His clinical presentation was consistent with EM, but he denied having any current or prior episodes of HSV infection.

The patient had been ill for the past 2 weeks, with a review of systems positive for cough and diarrhea. He reported at least 2 bowel movements per day, consisting of loose, watery stool without dark or bloody discharge. He denied having associated nausea, vomiting, or abdominal pain or cramping. His primary care provider had diagnosed him with an upper respiratory viral infection and traveler's

### Abbreviations used:

EM: erythema multiforme  
HSV: herpes simplex virus

diarrhea, given his recent trip. He denied taking any medications or supplements.

The patient was started on empiric valacyclovir, given the common association of EM with HSV, as well as clobetasol ointment and lidocaine gel as needed for pain. Further workup was ordered, given his recent illness, to elucidate an alternative etiology. He returned to the clinic 1 week later with worsening of the palmar involvement. There was an increase in the number and size of the bullae, as well as associated hemorrhages within larger bullae (Fig 1, B). He was started on an oral prednisone taper.

Testing was completed, which revealed a normal chest X-ray, negative stool cultures, and a stool ova and parasite examination positive for *E histolytica*.

The patient was started on 500 mg of metronidazole every 8 hours for 10 days, with rapid improvement in the appearance and symptoms of his hands. There was resolution of active lesions, with only residual collarettes of scale surrounding reepithelialized skin over the sites of the prior bullae (Fig 1, C). Three weeks later, his hands were clear of the active lesions, and the pain and itch had resolved. Physical examination revealed only light pink-to-brown patches on the sites of the prior bullae.

## DISCUSSION

We describe the first case in the literature, to our knowledge, of *E histolytica*-related EM, with resolution after proper treatment of the underlying condition. This etiology was discovered through a

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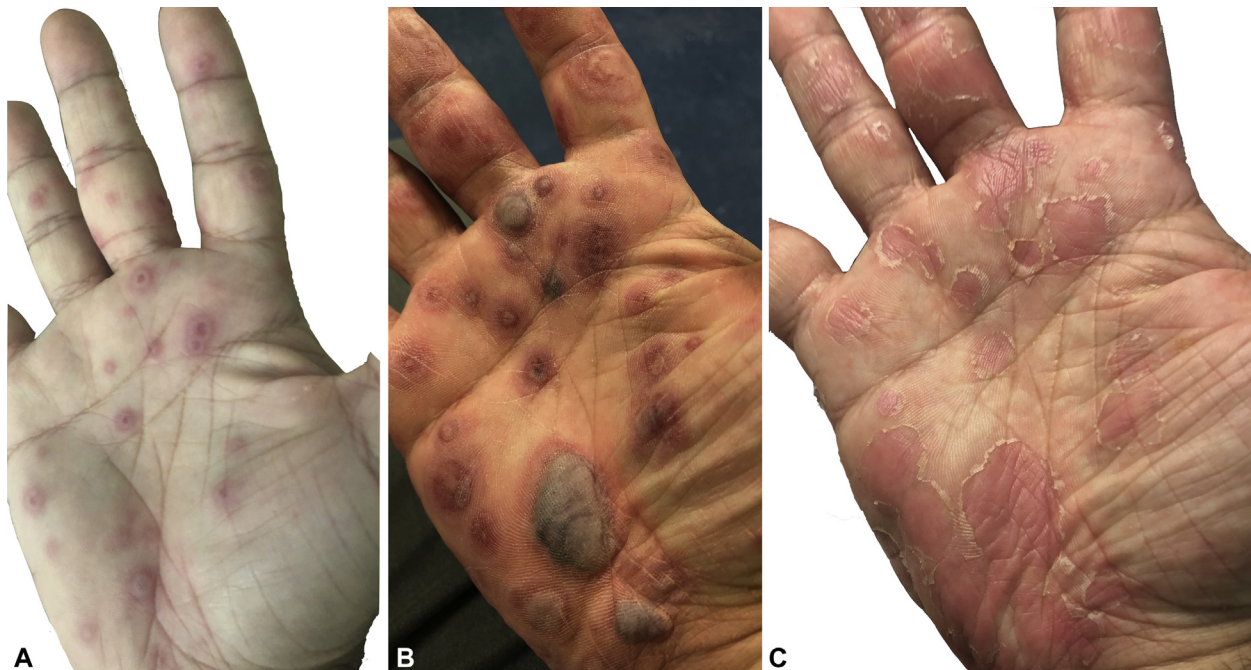
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**Fig 1.** **A**, Targetoid bullae on the right palm. **B**, An increase in the size of targetoid bullae with associated hemorrhage. **C**, Collarettes of scale surrounding the sites of prior bullae on the right palm.

symptom-driven workup as our patient did not present with a history or clinical examination consistent with an HSV infection, to which EM is often attributed without clear evidence.

Infections are the most common trigger for EM, followed by drugs.<sup>2,3</sup> Systemic diseases, neoplasms, vaccinations, allergic contact dermatitis, and idiopathic etiologies have also been described.<sup>1,4</sup> HSV is the most common precipitant of EM, followed by *M pneumoniae*.<sup>2,4</sup> HSV-related EM often presents with typical target lesions in an acral distribution with little or no mucosal involvement, while *M pneumoniae*-related EM often has a more severe presentation than that of EM major, with severe mucositis, which has been termed as mycoplasma-induced rash and mucositis.<sup>5</sup> Both etiologies have resulted in bullous lesions, as in our patient.<sup>6</sup>

Many cases labeled as idiopathic EM may have an associated condition that has not been discovered. We recommend a complete review of systems and a symptom-guided workup in patients with EM of unclear etiology while providing classic treatment measures (ie, antiviral medication for a possible HSV association), as was done in our patient. This case

illustrates the importance of a thorough workup in investigating the precipitating factor in patients with EM to better guide treatment in resolving this condition.

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